

SCHOOLBOYS STUDY FLYING

SOME ARE EVEN SELLING THEIR MODEL AEROPLANES.

Novel Course for the Youngsters of 77—Run Their Own Patent Office and Swap and Sell Parts and Ideas—Hope to Pass the Rubber Band Motor Stage.

New York has a juvenile school of aviation in Eighty-sixth street, which has for its pupils boys of Public School 77. These boys are not a little proud of the fact that they are pioneers in this science, for their school was the first to introduce the work in the physics course. These boys have become tutors to others less advanced in the subject and are making copies of their best models to be used in other schools for instructing classes. The boys took orders last week for two New York schools, one from a school in Raleigh, N. C., and two from the high school in Adrian, Minn. Interest is growing so rapidly that there is to be a national organization with interstate meets.

Any boy who can furnish material for one model can become a member. The cost of a model is about 60 cents. The boys often reduce this expense by trading parts. For instance, one boy gave another a piece of aluminum for a propeller for a piece of spruce with which to build a frame. Some of the boys show a keen business instinct in guarding knowledge of the places where they can secure the best rubber bands. They also bargain their trade secrets.

A patent office has been established where a boy can protect his ideas. The first boy to file an application was Victor E. a chap about 11 years old. He has invented a propeller, made of laminated spruce, which is said to give a large amount of efficiency. This is considered a valuable invention, as it requires more skill on the part of a boy to make a propeller than any other part.

Oscar Schlegel has taken out patents on an attachment of the motive power. Frank Hader has a patent for the arrangement of planes along the center rod and J. Brown has a device for maintaining equilibrium. A catapult for launching a model belongs to Howard Mallon. Several weeks ago the boys conceived the idea of forming a stock company, and capitalized



A SUCCESS AND A WRECK.

organized under the auspices of the Women's Aerial League of London. A. E. Horn, the instructor of the class, says that the boys of this country are far in advance of English boys.

The boys began the work by flying kites and this gave them excellent ideas of the atmospheric conditions. They also visit the weather bureau at the Central Park arsenal. Almost any one of

power. Most of the prizes have been captured with the monoplane type. More than 100 boys have built successful models on the single plane line.

Miss Hintze, the German teacher, has offered a cup for a model aeroplane to rise from the ground by its own power and fly 100 feet to be competed for at the next contest. The boys hope in a short time to make models that will fly 1,000 feet. So far only rubber bands have been



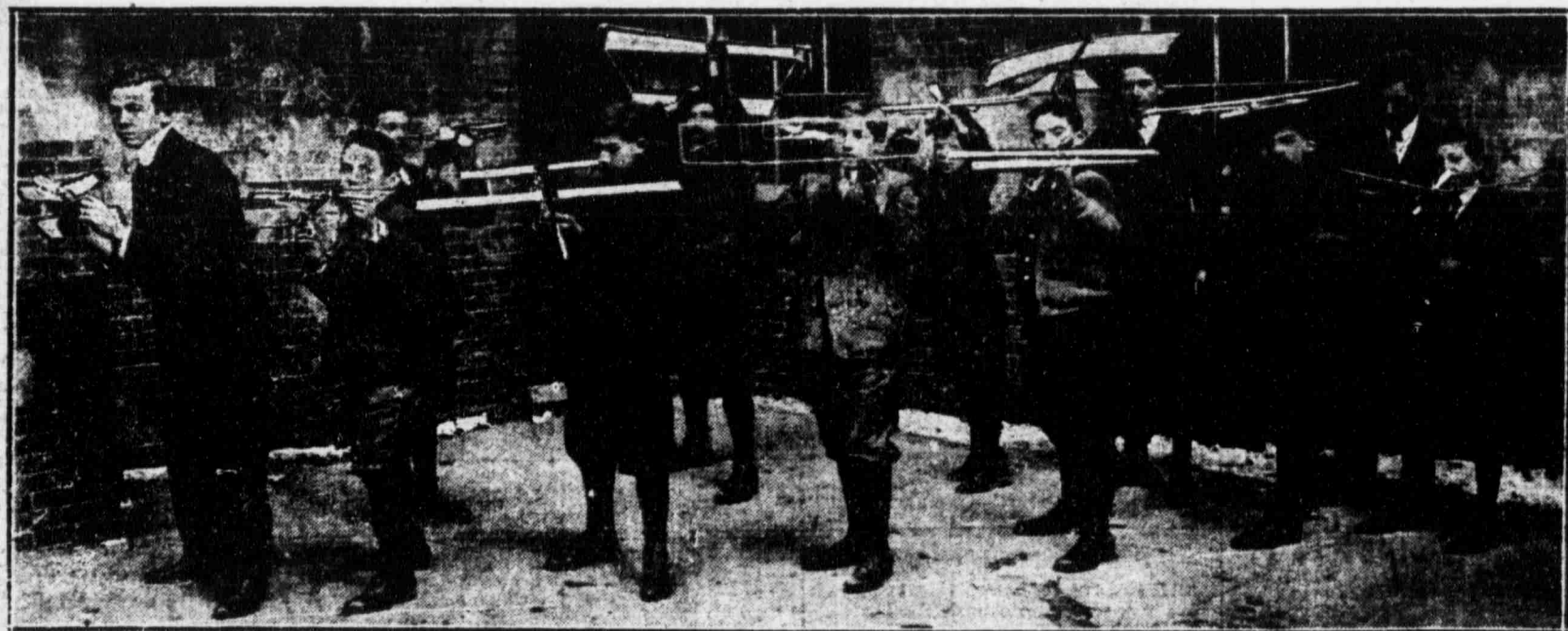
MAKING THE AERPLANES.

at \$30. Shares of stock were issued with a par value of 10 cents and they have now advanced to 12 cents.

The boys of School 77 are making an effort to bring about an affiliation with the Juvenile Aerial League of Great Britain.

can roughly predict the weather conditions and they are now making weather flags to fly from kites. While the Wright biplane is popular with the boys it isn't the best flier, for its double structure is too heavy to be propelled by the rubber band motive

used to supply the motive power, but the boys are constructing an engine with aluminum geared wheels connected with a clock spring to attain 140 revolutions a minute. They calculate that with this power an aeroplane can be sent from 1,000 to 2,000 feet.



THE FLEET OF AIRSHIPS.

WEASEL AND ERMINE.

Habits and Appearance of Two Strange Little Animals.

The weasel is about six inches in length from tip to tip, which seems very great compared with the height of the animal, which is not above an inch and a half. The wolf is not above one and a half time as long as he is high, while the weasel is nearly five times as long, an amazing disproportion. The tail also, which is bushy, is generally two inches long and adds to the apparent length of the body.

The color of the weasel is a light brown on the back and sides, but white under the throat and belly. The eyes are little red black. The ears are short, broad and roundish and have a fold at the lower part, which makes them look as if they were double. Beneath the corners of the mouth on each jaw is a spot of brown. This animal though diminutive in appearance is nevertheless a very formidable enemy to quadrupeds a hundred times its own size. When kept in a cage it will not touch its food while anybody looks on. It keeps in a continual agitation and seems frightened so much at the sight of mankind that it will die if not permitted to hide itself.

For this purpose, says *Pur Ver*, it must be provided in its cage with a sufficient quantity of wool or hay in which

it may conceal itself and where it may carry whatever it has to eat. In this state it is seen to pass three parts of the day in sleeping and reserves the night for its exercise and eating.

In its wild state the night is likewise the time during which it may be said to live. At the approach of evening it is seen stealing from its hole and creeping about the farmer's yard for its prey. If it enters the place where poultry is kept it never attacks the cocks or the hens but immediately goes after the young ones. Generally it merely sucks the blood of the victim.

It is remarkably active and in a confined place scares any animal can escape it. It will run up the sides of the walls with such facility that no place is secure from it. Its body is so small that there is scarcely any air but that it can wind through. During the summer its excursions are extensive; but in the winter it chiefly confines itself in barns and farmyards, where it remains till spring and where it brings forth its young.

All this season it makes war upon rats and mice with still greater success than the cat, for being more active and slender it pursues them into their holes and after a short resistance destroys them. It creeps also into pigeon holes, destroys the young, catches sparrows and all kinds of young birds, and if it has brought forth its young hunts with still greater boldness and avidity. In summer it ventures further from the house and particularly goes into those places where the rat, its chief prey, goes before it. The female takes every precaution to

make an easy bed for her little ones and lines the bottom of her hole with grass, hay, leaves and moss and generally brings forth three to five to a litter. The weasel, like others of its kind, does not run on equably but moves by bounding, and when it climbs a tree by a single spring it gets a good way from the ground. It jumps in the same manner upon its prey and having an extremely limber body evades the attempts of much stronger animals to seize it.

Next to the weasel in size and perfection alike in figure is the ermine. The difference between this and the former animal is so small that some writers give but one description of both. Some believe that the two kinds are distinct. The stoat, or ermine, differs from the weasel in size, being about nine inches long, whereas the former is not much above six.

The tail of the ermine is always tipped with black and is longer in proportion to the body and furnished with hair. The edges of the ears and the end of the toes of this animal are of a yellowish white and although it is of the same color as the stoat, being of a lightish brown, and though both this animal as well as the weasel in the most northern part of the different countries changes color in winter and becomes white, yet even then the weasel may be easily distinguished from the ermine by the tip of the tail, which in the latter is always black.

In summer the ermine, as was said before, is brown, and it may at that time more properly be called a stoat. There are few so unacquainted with quadrupeds as not to perceive this change of color in the hair, which to some degree obtains in all of them.

MYSTERY PLAYS ONCE MORE

TWO MEDIEVAL SPECTACLES GIVEN IN NEW YORK.

The Story of Bethlehem Presented Under the Auspices of Episcopal Clergymen—Similar Spectacle, "Holy Night," by Children in Greenwich Village.

Two spectacles presented recently in New York marked the growth of an interesting movement. Both were efforts to visualize the story of Bethlehem just as it was done in the Middle Ages by romantic dramatists in their miracle plays. Neither of these spectacles was given in a church. The more elaborate spectacle of the two took place in Carnegie Hall with the Bishop of the Episcopal diocese of New York as the chairman of the society which organized the production of "Bethlehem" on Epiphany afternoon and on the following evening.

The Christmas Play Association, which made its first appearance this winter, is a serious organization and intends to

Incarnation, the Rev. Dr. W. T. Manning of Trinity Church, the Rev. Dr. Henry Motter of the Church of the Holy Communion, the Rev. Dr. H. P. Nichols, the Rev. Dr. J. Lewis Parks of Calvary Church, the Rev. Herbert Shipman of the Church of the Heavenly Rest, the Rev. Dr. E. M. Stires of St. Thomas's, the Rev. Dr. S. Delancy Townsend, the Rev. Dr. G. R. Van De Water and the Rev. Ernest Voorhis.

There are included in this list the rectors of the most important parishes in the diocese. With the exception of Trinity Church the churches belong to the so-called low wing of the denomination and the services celebrated in them contain no suggestion of the elaborate ritual of the high church parishes.

But these clergymen evidently believe that there is no harm attached to the use of ritualistic symbols outside the chancel of their churches. So the performance of the Nativity mystery play at Carnegie Hall was accompanied by all the ritual details customary in the advanced parishes of the Episcopal Church and in the Roman Catholic services as a matter

dental music, although part of it was attributed to the programme to Joseph Moorat.

After an organ prelude the chorus and as many of the audience as could give Mendelssohn's "Hark, the Herald Angels Sing." Then the spectators had to imagine that the stage represented a bare field on the road to Bethlehem. There seven shepherds and *Old Blind Abel* discussed the appearance of the wonderful star, but it was not until the *Angel Gabriel*, dressed in shining silk robes, appeared from behind the curtain in the rocks, that the meaning of the star was made clear to them.

The text which Lawrence Housman wrote for the play when it was first given seven years ago in England was characterized by appropriate simplicity and naïveté. There were no names on the programmes by which the characters could be identified; the actors all came from the General Theological Seminary, where they are studying to enter the church. The only woman who took part in the play enacts the rôle of the *Blessed Virgin*.

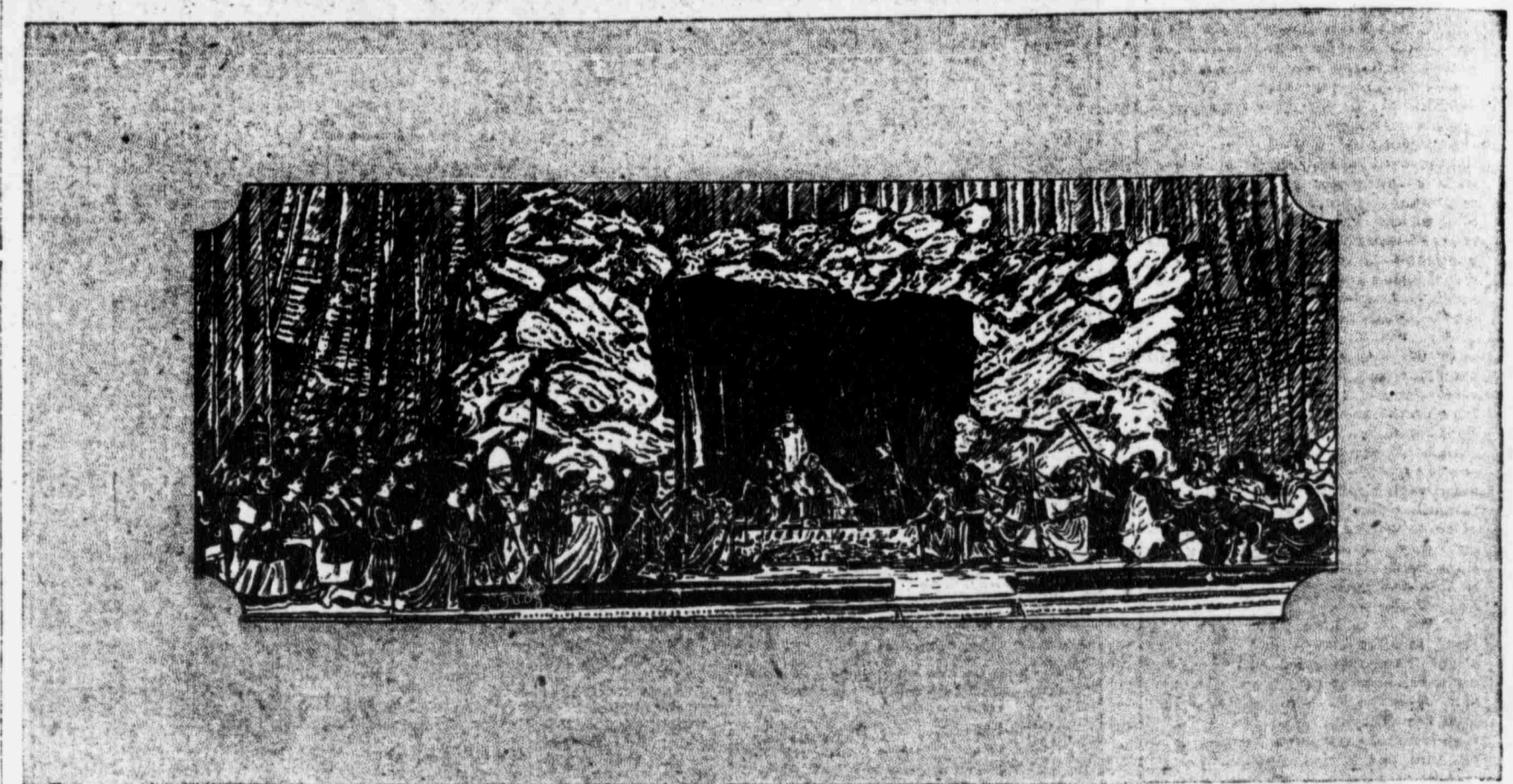
It was after the shepherds started in search of the spot over which the star shone that the most spectacular feature of "Bethlehem" occurred. "The Procession of the Angel of the Star" this interlude was called.

Joseph the Carpenter was also there, although these figures were seen somewhat vaguely through the gauze. Above the manger home alone the star that led the company thither.

The Kings with their gifts, *Old Blind Abel*, the shepherds, again the *Angel Gabriel* and a stableman were the figures in this episode, which showed the arrival of the worshippers throng at the manger and their adoration of the two figures shining through the gauze. "Silent Night, Holy Night," the old hymn brought the performance to a close and the audience left the theatre to the music of a postlude played on the organ.

The first production of the play was made for the benefit of an invited audience, while the evening of the day after the Epiphany was set aside for the Sunday school children of the city who packed Carnegie Hall from the first row of the orchestra to the last in the gallery and listened in attentive silence, except when they knew the hymns well enough to sing them from the slips containing the words which were distributed throughout the hall.

The fact that the association had never given the play before led to inevitable crudeness and a certain amateurishness in its performance. It cannot be said, however, that these qualities interfered with its effectiveness. Too great expert-



THE MYSTERY PLAY AT CARNEGIE HALL.

repeat this spectacle every year. It gives its raison d'être in these words:

The Christmas Play Association has been formed to bring into the midst of our busy New York life something of the spirit and sacredness of the old Christmas which our forefathers knew in England and elsewhere in Europe. It plans to give a Nativity mystery play every year at the Christmas season. These plays are to be essentially religious in character and are to be given under the auspices of the Church. The greatest care will be taken to make the productions beautiful and reverent and to bring home to the hearts of men the old story of the shepherds and the angels and the manger throne.

We hope eventually to be able to give a number of such representations for the great masses of people throughout the city at a minimum price. The story of the birth of Christ cannot be told too often or too well, and we believe that such plays should have an important part in the Christian education of our people.

The novelty of such an announcement coming from clergymen of the Episcopal church of this city would be striking enough without the list of names added to it. The Rev. Hugh Birchhead, rector of St. George's, is the chairman of the board of directors, which consists further of the Rev. Dr. J. G. H. Barry, the Rev. Dr. Loring W. Batten, the Rev. W. T. Crocker, the Rev. Percy S. Grant of the Church of the Ascension, the Rev. Dr. William Grosvenor of the Church of the

of course. Clouds of incense floated aromatically in the air, capes, dalmatics and cassocks dressed the priestly participants in the pageantry of "Bethlehem," and the sluggish dramatic action of the play was accompanied by signs of physical deference to the *Angel Gabriel*, to the *Child* and the *Mother* in the manger room, and similar practices common enough in churches that admit the value of ritual in their services as well as in the plays given under their auspices.

One view of this new society's objects would be interesting even if it could claim attention on no other grounds. The parishes in the Protestant Episcopal Church that are accustomed to represent the ritual practices most completely in their services are back of this attempt to impress the truths of Christianity on their parishioners and "the great masses of the people throughout the city."

Carnegie Hall's stage was hung with the dim colored curtains which used to form the background for Isadora Duncan's Greek prouetings. In the centre of the opening was a rocky which was supplied with translucent draperies that fell in thick folds. Homer Norris, organist of St. George's, who assisted M. Birchhead in preparing the work for the stage, arranged much of the inci-

dent in a cope and bearing a staff surmounted by a blazing star, a bishop led the procession to the manger. The singing cohorts were heard first in the rear of Carnegie Hall and marched down the middle aisle singing the Christmas hymn, "Ad te Fidelis." The *Angel Gabriel* stepped down from the rookery to the centre of the stage. The bishop, flanked by the acolytes, ascended the steps from the auditorium and made a reverence before the celestial messenger.

The long procession, which included more priests and bishops, shepherds, the three Kings following the star, *Old Blind Abel*, who was so despoiled that he had to be helped by the arms of the younger men to keep his place in the procession, negroes clad in the supple garments of the day, a thurifer swinging incense in front of the procession, until the *Child* permeated the hall, marched between the spectators, ascended to the stage and bowed to the *Angel Gabriel*. A musical interlude and the singing of Mendelssohn's "Brightest and Best" closed what was called the first act of "Bethlehem."

In the second act there was sufficient light behind the thin curtains of the rookery to show the *Virgin* seated there and holding the child at her breast. St-

ness in the action, an excessive finish in the pageantry might detract from the rugged simplicity and seriousness which are the essentials of such a performance. The association desires its symbolism and religious significance rather than its expert dramatic performance to be the feature of these annual plays.

The performance of "Holy Night," another miracle play with the same purposes, was arranged by Miss Katherine Lord and Miss Eva McAdoo. It was given first in Greenwich House and later was acted in the assembly room of the public library at 68 Leroy street.

This was a much less ambitious production than the effort of the Christmas Play Association, and the youngsters of the neighborhood did it all themselves for the amusement of their friends and families. There were representations of angels in white robes and the Wise Men as well as the animals that surrounded the manger bed on the first holy night that this performance was supposed to commemorate and explain. Last summer the authorities at Greenwich House gave one or two open air pageants, and the Christmas play this year was an attempt to stir the imagination and increase the knowledge of the young members by the same theistic means.



MYSTERY PLAY AT GREENWICH HOUSE.

Germany and Spain Both Go In for This Sort of Gambling.

Most persons would not assume to trace any distinct resemblances between Germans and Spaniards, but they meet on one common ground and that is gambling. The lottery is as great an institution in Germany and as eagerly participated in as ever the Spanish variety. In both countries there are official as well as private lotteries.

There is this difference: The lottery tickets in Spain are peddled everywhere. In the streets the small boys crying the newspapers offer lottery tickets if you do not care to read. In the theatres, if there are always lottery tickets to be had.

In the clubs and the cafés there is great excitement in Spain after the broadside containing the winning numbers comes out. The boys run around the streets hawking these sheets like newspapers, and those who cannot afford to buy them crowd around the small tobacco

shops where lottery tickets are sold to see if by chance they have drawn a prize. In the cafés, you see men crammed over these sheets, comparing the numbers with bundles of the papers which may represent fortunes.

The Spanish illustrated weeklies always make a feature of the drawings for the big lotteries, such as the Christmas drawing. They seek out the possessors of the fragments of the main prizes, because almost never has the winning ticket been held entirely by one person. There are always stories of how Senora X., having dreamed of a certain number combination, exhorted her husband to buy this, and how he bought a thirty-second part of the ticket and behold! it won a prize of 4,000 pesos. There are always, too, stories of how some person, convinced that he would not win, gave away or sold very cheaply part of the ticket that took the big prize.

In Germany things are quieter but none the less determined. The tickets for the Government lotteries are sold in regular licensed stores, which do no other business. The investors buy their

way into four or five successive drawings, convinced that as the speculators who won small or large prizes are eliminated there is more room for them.

The German lottery is different from the Spanish in that way. There is one big drawing every once in a while in Spain, for which a ticket is good only once. The German sort is in series, good for, say, five drawings, limiting the field for the last drawing, because every number that wins a prize is paid off and eliminated after the successive drawings.

There are any number of unattached drawings, too, in Germany, and all the big cities have lotteries for various purposes. There are lotteries for the benefit of charities and so on.

Some Habits of the Fly.

From the *London Evening Standard*. Concerning his experiences while studying the life and habits of the house fly Henry Hill, the well known lecturer, states: "I wish I could explain why a fly never walks down but always up a clean window pane and why on the other hand it will walk down the slanting glass front of a picture. It is also a mystery to me why a fly always reads head downward on a flycatcher's net. The house fly is a very interesting study."